

4 wherein said first image is rendered based on a first viewpoint corresponding to said first
5 cursor's position in said virtual three-dimensional world, and wherein said second image
6 is rendered based on a second viewpoint corresponding to said second cursor's position
7 in said virtual three-dimensional world.

B14 Sub C1

1 94. (New) A computer software program embodied on a computer-readable media, the
2 program comprising a plurality of instructions, wherein the computer software program is
3 configured to be executed on a computer coupled to one or more body sensing means and
4 one or more display devices, wherein the instructions are configured to:
5
6 receive a first set of data from the body sensing means;
7
8 emulate a first body in a three-dimensional virtual world by changing one or more
9 attributes of a first cursor, wherein the first cursor comprises a first plurality of
10 nodes configured as a first point hierarchy;
11
12 move the first cursor within the virtual world based on the first set of data;
13
14 modify a virtual three-dimensional work piece based on the motion of the first
15 cursor within the virtual world;
16
17 update a database to reflect the changes to the virtual three-dimensional work
18 piece; and
19
20 cause the database to be rendered into one or more images from one or more
21 different viewpoints; and
22
23 cause the one or more images to be displayed on the one or more display devices.

REMARKS

Applicants have resubmitted the amendment to the specification to reflect that the source code appendix is now in a microfiche appendix. Applicants have submitted 25 sheets of microfiche having a total of 1739 frames.

Claims 31, 32, 35, 38, 41, 43, 59, 60, 66, 72, 76, 78, 84, and 89 have been amended to provide proper antecedent basis, to prevent duplication of claim coverage,

and for clarification purposes. These amendments were not made to overcome any prior art.

New claims 90-94 have been added, thus claims 1-94 are now pending in the application. In the Office Action dated September 7, 1999, the Examiner rejected claims 1-89 under 35 U.S.C. § 251 as being drawn to subject matter voluntarily given up by the Applicants in order to obtain a patent. Applicants respectfully traverse this rejection for at least the reasons set forth below.

In applying the recapture rule, one must determine in what aspect the reissue claims are broader than the patent claims, and whether the broader aspects of the reissue claims relate to surrendered subject matter.¹ “To determine whether an applicant surrendered particular subject matter, we look to the prosecution history for **arguments** and changes to the claims made in an effort to overcome a prior art rejection. [Emphasis in original]”² With regard to claim amendments, the recapture rule does not apply in the absence of evidence that the amendment was an admission that the scope of the claim was not patentable.³

Applicants contends that the only areas in which new claims 31-89 are broader than the original allowed claims 1-30 are areas that are not germane to surrendered subject matter. In particular, Applicants note that only one amendment in response to prior art was filed in the prior application⁴. That amendment was filed on March 8, 1996. As stated on page 15 of the amendment, Applicants specifically argued that claims 1, 26, and 30 were allowable because:

¹ See *In Re Clement*, 45 USPQ.2d 1161, 1164 (CAFC 1997).

² *Hester Indus. Inc. v. Stein Inc.*, 46 USPQ.2d 1641, 1647 (CAFC 1998), citing *In re Clement*, 45 USPQ.2d 1161, 1164 (CAFC 1997).

³ See *Hester at 1648*, citing *Clement at 1164*.

⁴ Applicants note that in the Office Action dated November 8, 1995 that preceded the amendment in the original case, the Examiner rejected pending claims 1-26. Claim 1 was rejected under 35 U.S.C. § 103 as obvious over Waldren (U.S. Patent No. 4,884,219) in light of Fisher, et al. (Virtual Environment Display System).

“Walden does not reach or suggest the positively recited features in Claim 1 of the first body emulating means including **a first point hierarchy** and a first data flow network, the first data point hierarchy **for controlling a shape and an orientation of the first cursor...**; [and] the second body emulating means including **a second point hierarchy** and a second data flow network, the second data point hierarchy **for controlling a shape and an orientation of the second cursor...**” [Emphasis added]

Applicants note that the above features are recited in new claims independent claims 31, 66, 72, and 77. In particular, Applicant notes that claims 31, 66, 72, and 77 recite “the first cursor comprises a first plurality of nodes configured as **a first point hierarchy**” and “**changing one or more attributes of a first cursor.**” Similarly, claims 31, 66, 72, and 77 recite “the second cursor comprises a second plurality of nodes configured as **a second point hierarchy**” and “**changing one or more attributes of a second cursor.**” Applicants contend that these highlighted features are the only features germane to the rejection faced by Applicants in the original application. As such, Applicants contend that the remaining features of claims 31 and 66 that are broader than claim 1 are not subject to the recapture rule and are proper since the reissue application was filed within the two year period specified for broadening reissue applications under 35 U.S.C. § 251. The same reasoning applies to claims 32-65, 67-71, 73-76, and 78-87, which depend from claims 31, 66, 72, and 77 respectively.

Furthermore, assuming *arguendo* that some of Applicants’ new claims broaden aspects that are potentially related to the cited prior art, Applicants contend the claims are nevertheless proper in a broadening reissue application because other features in the claims are recited with greater specificity. Applicants highlight the Federal Circuit’s decision in *Ball Corp. v. U.S.*, 221 USPQ 289 (CAFC 1984), in which the Court held that the recapture rule was avoided because the reissue claims were sufficiently narrow despite the broadened aspects of the claims.⁵ “The purpose of [the Ball] exception to the recapture rule is to allow the patentee to obtain through reissue a scope of protection to which he is rightfully entitled for such overlooked aspects.”⁶

⁵ See *Hester at 1649*, citing *Ball at 296*.

⁶ *Hester at 1650*.

In *Ball Corp. v. U.S.*, Ball Corporation (“Ball”) sued the United States government (the “Government”) for unauthorized use of an invention claimed in Re. 29,296.⁷ On interlocutory appeal, the Government raised two issues: (1) that the error alleged by Ball was insufficient under 35 U.S.C. § 251 to support reissue; and (2) that Ball was estopped from securing claims in the reissue application directed to a certain feature (i.e., a single feed).⁸

In the original application, Ball had claims directed to an antenna of cylindrical configuration with a feed means including a single feed line with “at least one conductive lead” (claim 8 of the original application) and “a plurality of leads” (claim 9 of the original application).⁹ The examiner rejected claims 1-8, and indicated that claims 9-10 should be limited to a “plurality of feedlines”.¹⁰ Ball amended the claims, and in a second office action the examiner suggested the allowability of the plurality of feedlines claims if presented in independent form.¹¹ The remaining claims were rejected over newly cited art, a U.S. Patent No. 2,234,234 to Cork, et al., that discloses a single feedline.¹² In response Ball amended its claims to recite “a plurality of leads,” and canceled the original claims 7 and 8.¹³ The patent issued, and within two years Ball applied for a broadening reissue.¹⁴

During the reissue proceedings, Ball pursued and received allowance of claims that recited a single feedline along with several new features (e.g., a dielectric material filling the cavity of the antenna).¹⁵ These claims did not include the “cylindrical” limitation from the previously issued claims.¹⁶ The Government filed for summary judgment, arguing that Ball could not obtain claims to the single feedline because this

⁷ See *Ball* at 290.

⁸ *Id.* at 293.

⁹ See *id.* at 291-292.

¹⁰ See *Id.*

¹¹ See *Id.*

¹² See *Id.*

¹³ See *Id.*

¹⁴ See *Id.*

¹⁵ See *Id.* at 292-293.

¹⁶ See *Id.*

feature had deliberately canceled claims to the single feedline in the original application.¹⁷ The district court denied the Government's motion, and on appeal the Federal Circuit affirmed.¹⁸

The Federal Circuit stated that the proper focus was the "scope" of the claims, not on the individual features or elements purportedly given up during prosecution of the original application.¹⁹ "We are aware of the principle that a claim that is broader in any respect is considered to be broader than the original claims even though it may be narrower in other respects. That rule will not bar Ball from securing the reissue claims here on appeal."²⁰ The Court also noted that the recapture rule should be applied equitably: "[t]he recapture rule...is based on equitable principles. The rigidity of the broader-in-any-respect rule makes it inappropriate in the estoppel situation presented in this appeal."²¹ The Court noted that the reissue claims were broader in certain respects and narrower in certain respects, and yet the Court held that the broadening of the claims was proper under 35 U.S.C. § 251 because the reissue application had been filed within the two year period specified in the statute.²²

Applicants note that in new claims 31-89 a large number of features are recited that were overlooked in the original application. For example, claim 37 recited features not recited in the original claims including "an Ethernet link, a phone link, and ISDN line, or a satellite link." Similarly, claim 44 also recites features not recited in the original claims such as "machines, articles of manufacture, animals, molecules..." Other examples include claim 68, which recites "one or more audio display devices configured to produce three-dimensional sounds..." and claim 69, which recites a number of different embodiments of the "body part sensing means". Thus, Applicants contend that under *Ball*, *Clement*, and *Hester*, claims 31-89 are properly presented in this broadening reissue application.

¹⁷ See *Ball* at 293.

¹⁸ See *Id.*

¹⁹ *Id.* at 295.

²⁰ *Id.* at 295-296.

²¹ *Id.* at 296.

²² See *Id.*

CONCLUSION

In light of the foregoing amendments and remarks, Applicants submits the application is now in condition for allowance, and an early notice to that effect is requested. If the Examiner does not find that the application is in a condition for allowance, Applicants respectfully request a telephone conference with the Examiner to discuss any remaining issues.

If any additional extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Conley, Rose, & Tayon, P.C. Deposit Account No. 03-2769/5181-10802/DRC.

Also enclosed herewith are the following items:

- ☒ Return Receipt Postcard
- ☒ Petition for Extension of Time
- ☐ Request for Approval of Drawing Changes
- ☐ Notice of Change of Address
- ☒ Check in the amount of \$302 for fees (1 month extension; 2 indep. and 2 dep. claims).
- ☒ Other: 25 pages of microfiche

Respectfully submitted,



Dan R. Christen
Reg. No. 39,943
ATTORNEY FOR APPLICANT(S)

Conley, Rose & Tayon, P.C.
P.O. Box 398
Austin, TX 78767-0398
Phone: (512) 476-1400

Date: January 6, 2000